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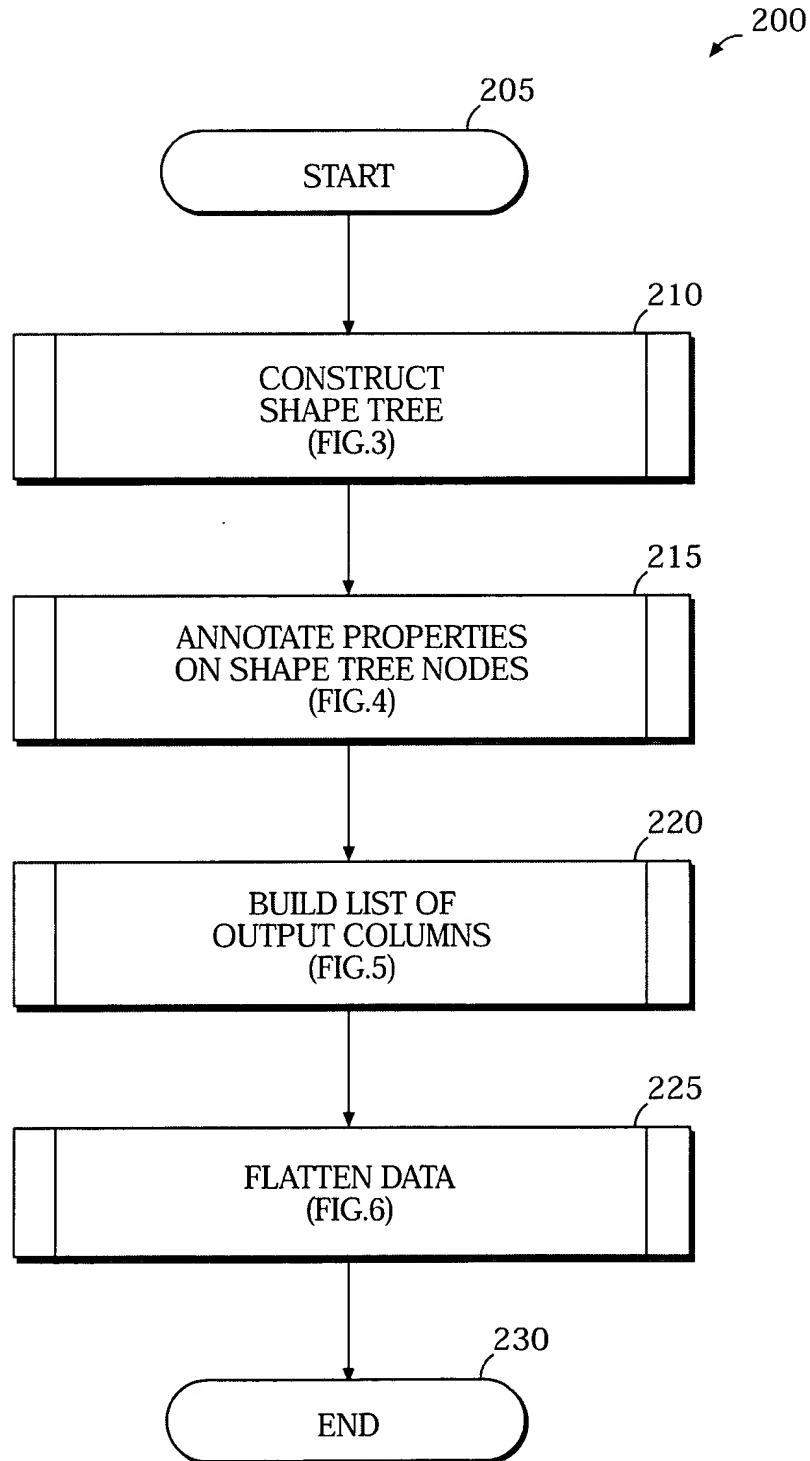


FIG.2



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CONSTRUCT SHAPE TREE

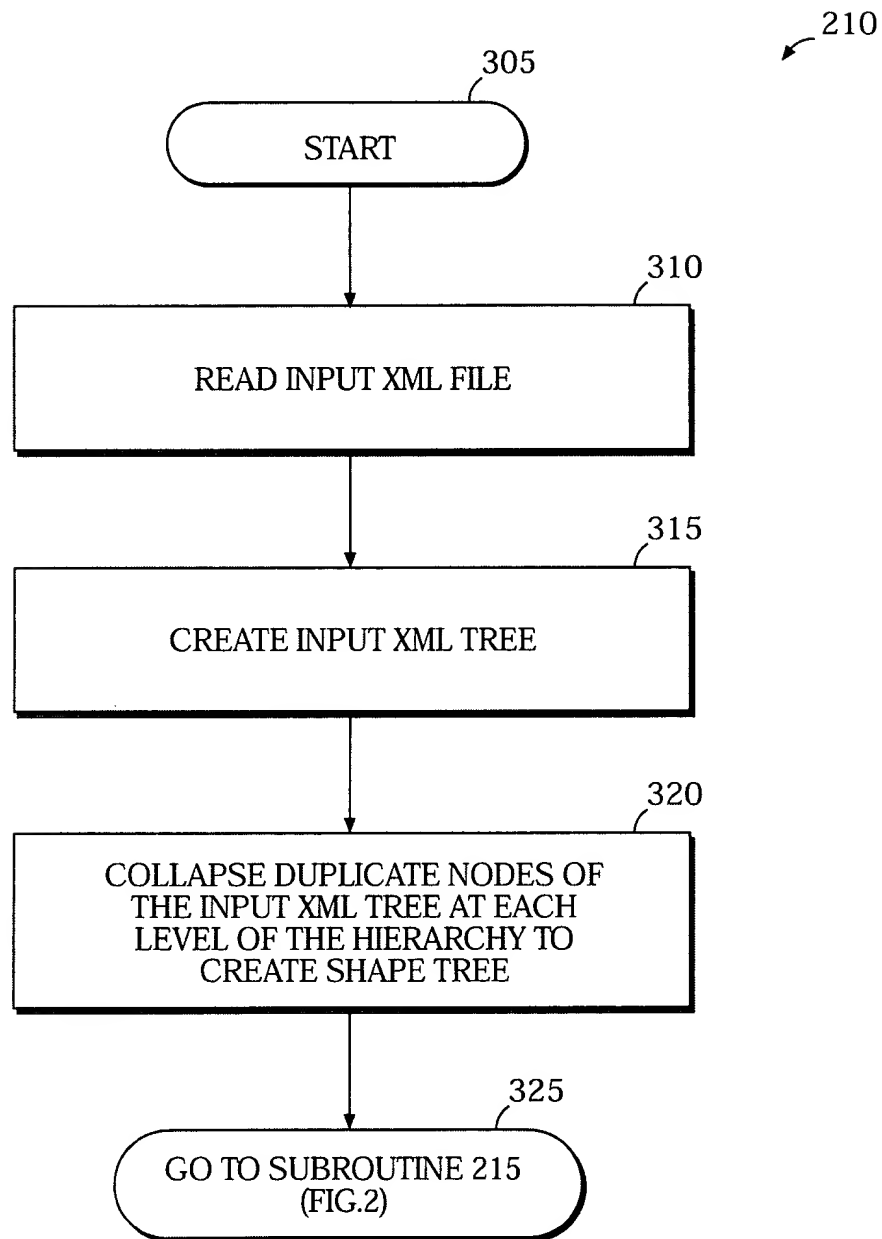


FIG.3



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ANNOTATE PROPERTIES ON SHAPE TREE

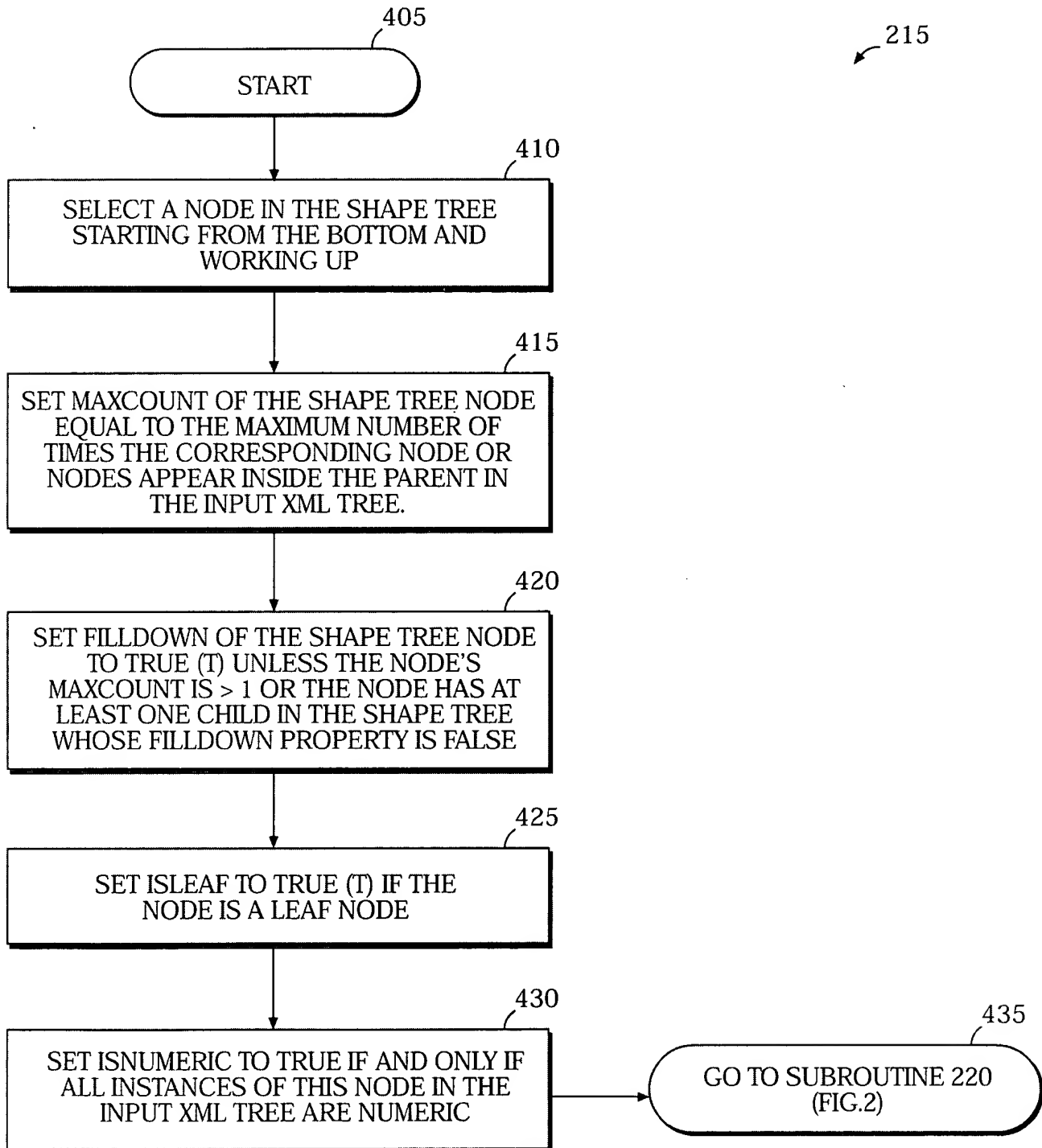


FIG.4



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BUILD LIST OF OUTPUT COLUMNS

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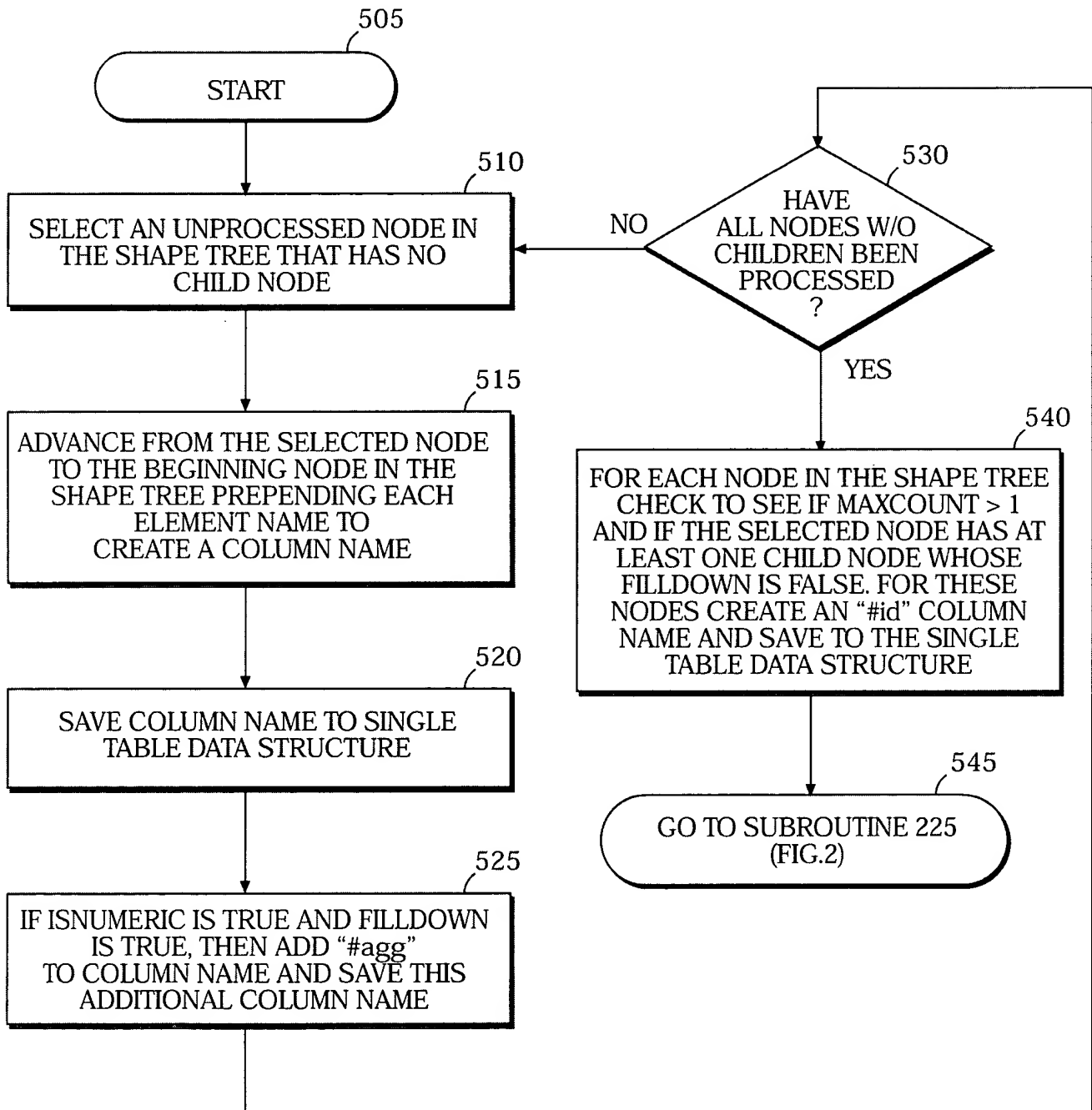


FIG.5

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FLATTEN DATA

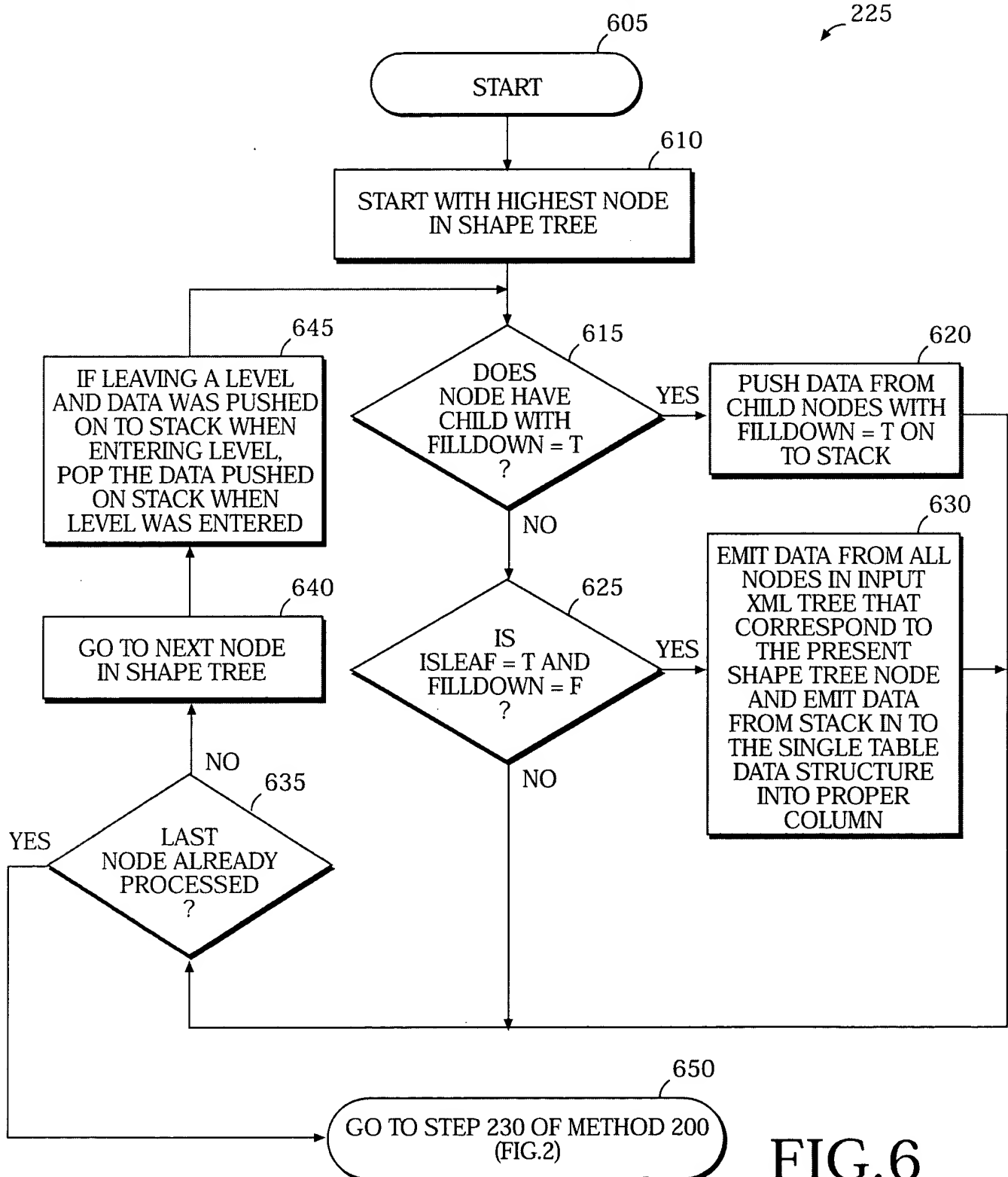


FIG.6



INPUT XML FILE

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< A >			-705
	< B > b 1 < / B >		-710
	< B > b 2 < / B >		-715
	< B > b 3 < / B >		-720
	< C >		-725
		< D > d 1 < / D >	-730
		< D > d 2 < / D >	-735
		< E > e < / E >	-740
	< / C >		-745
	< F > 7.95 < / F >		-750
	< C >		-755
		< D > d 3 < / D >	-760
	< / C >		-765
< / A >			-770

FIG.7

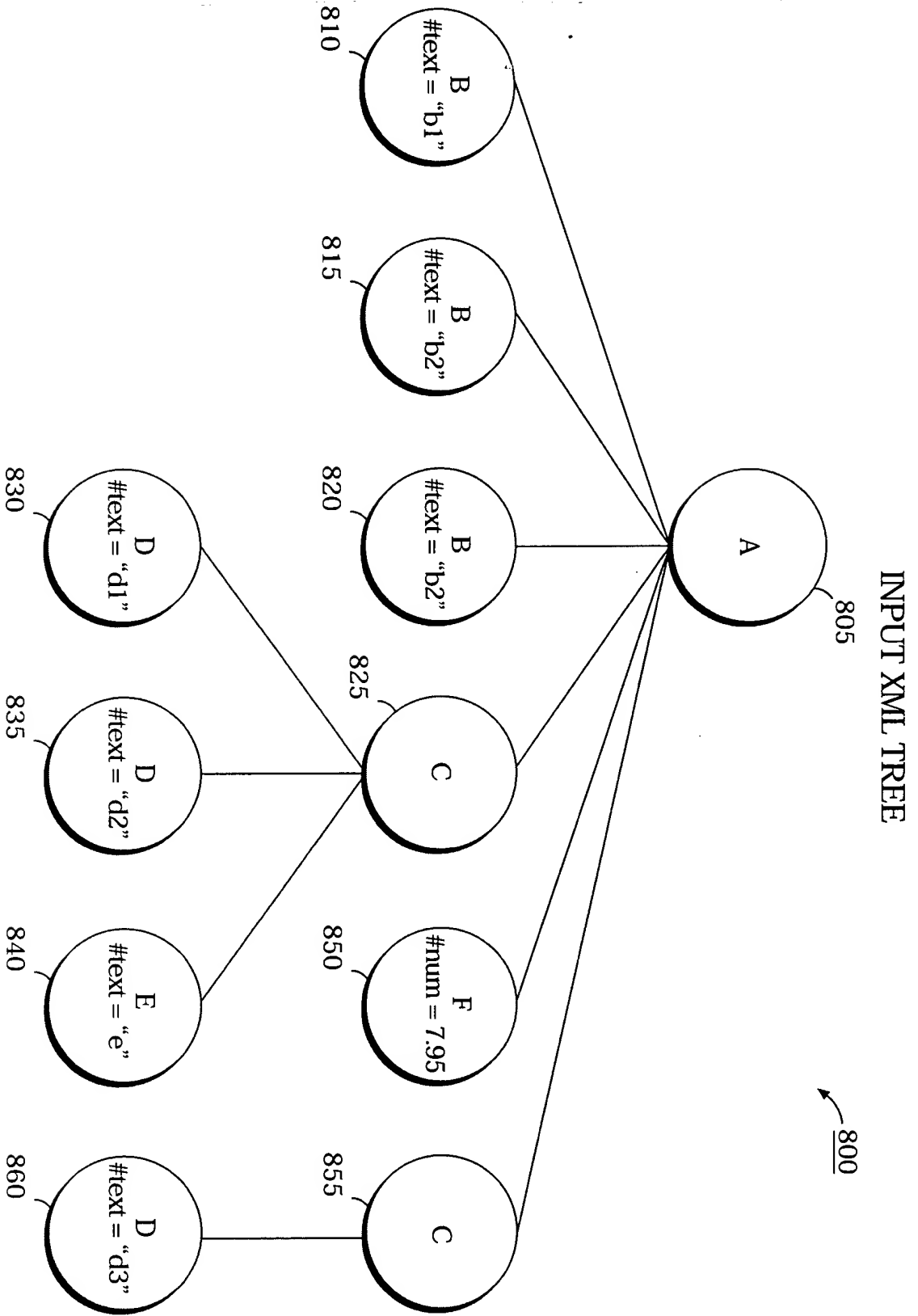


FIG.8

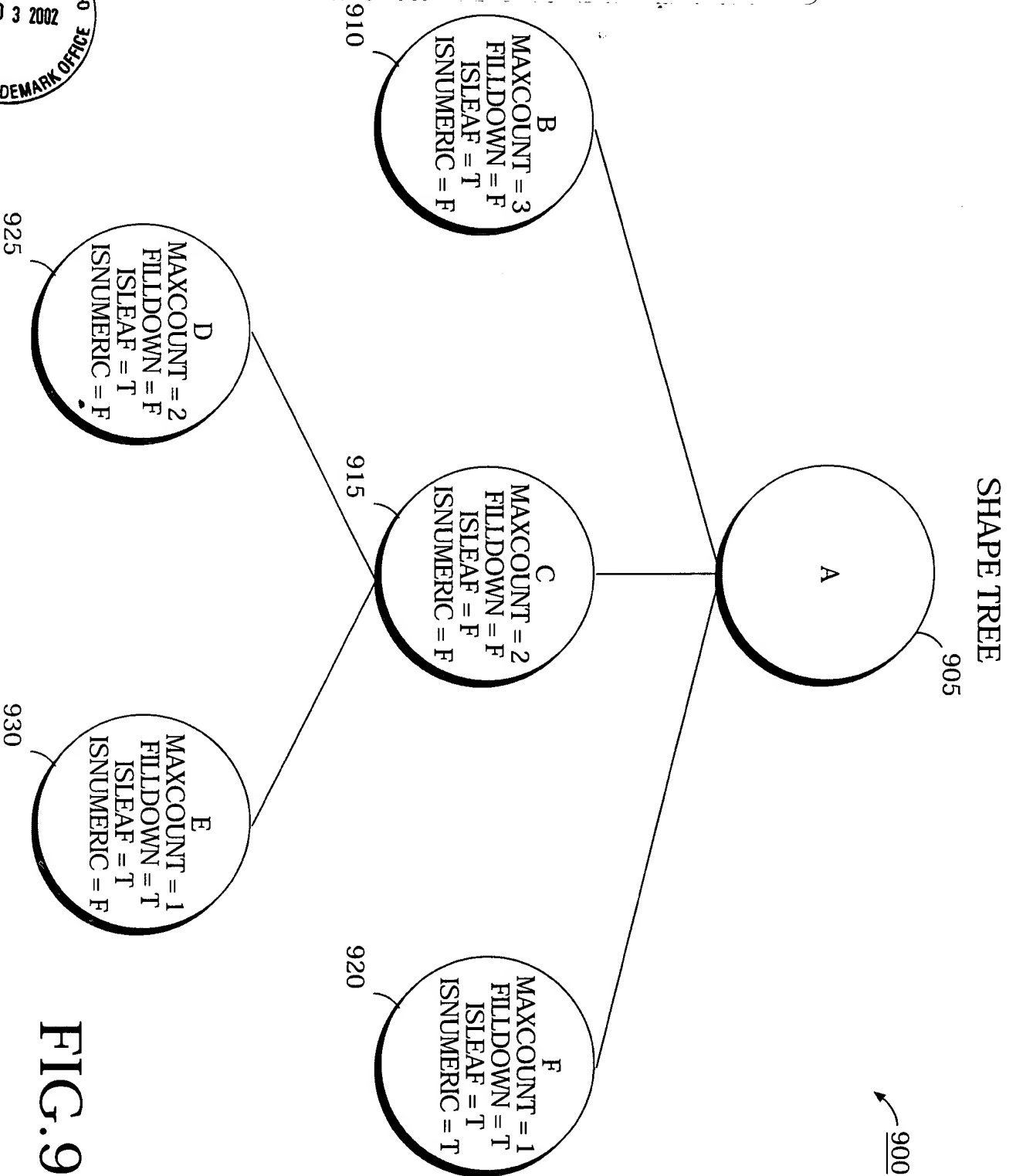


FIG. 9



FLAT DATA STRUCTURE

	1040	1045	1050	1055	1066	1065
1005 ...	/A/B/#text	/A/C/#d	/A/C/D/#text	/A/C/E/#text	/A/F/#num	/A/F/#agg
1010 ...	b 1				7.95	7.95
1015 ...	b 2				7.95	
1020 ...	b 3				7.95	
1025 ...		1	d1	e	7.95	
1030 ...		1	d2	e	7.95	
1035 ...		2	d3		7.95	

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FIG.10